



IES INDOOR REPORT
PHOTOMETRIC FILENAME : MX4D-8-00-L12-930-F-DIM1-UNV_.IES

DESCRIPTION INFORMATION (From Photometric File)

IESNA:LM-63-2002
 [TEST] GEN FROM BALLABS TEST NO. 29653.0
 [TESTLAB] BUILDING ACOUSTICS & LIGHTING LABORATORIES, INC
 [ISSUEDATE] 02-03-2025
 [MANUFAC] WILLIAMS INDOOR
 [OTHER] H.E. WILLIAMS, INC - CARTHAGE, MO 64836
 [LUMINAIRE] 8' DIRECT SUSPENDED LUMINAIRE
 [MORE] WITH FROSTED ACRYLIC LENS
 [LUMCAT] MX4D-8-00-L12-930-F-DIM-UNV
 [LAMPCAT] HLM 90 CRI, 3000K CCT
 [_SEARCH_SOURCETYPE] LED
 [_SEARCH_APPLICATION] Indoor, Architectural, Classroom, Direct
 [_SEARCH_MOUNTING] Suspended

CHARACTERISTICS

Lumens Per Lamp	N.A. (absolute)
Total Lamp Lumens	N.A. (absolute)
Luminaire Lumens	7707
Total Luminaire Efficiency	N.A.
Luminaire Efficacy Rating (LER)	89
Total Luminaire Watts	86.8
Ballast Factor	1.00
CIE Type	Direct
Spacing Criterion (0-180)	1.22
Spacing Criterion (90-270)	1.16
Spacing Criterion (Diagonal)	1.28
Basic Luminous Shape	Rectangular
Luminous Length (0-180)	8.00 ft
Luminous Width (90-270)	0.32 ft
Luminous Height	0.00 ft

LUMINANCE DATA (cd/sq.m)

Angle In Degrees	Average 0-Deg	Average 45-Deg	Average 90-Deg
45	11066	10730	10563
55	10162	9749	9473
65	8649	8509	8229
75	6566	6871	6489
85	3174	4081	3854

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CANDELA TABULATION

	<u>0.0</u>	<u>22.5</u>	<u>45.0</u>	<u>67.5</u>	<u>90.0</u>
0	3136.487	3136.487	3136.487	3136.487	3136.487
5	3150.510	3117.790	3103.767	3094.418	3094.418
10	3094.418	3061.698	3047.675	3038.326	3028.977
15	2986.908	2963.537	2940.165	2930.816	2916.793
20	2860.701	2827.980	2809.283	2781.237	2771.888
25	2697.099	2659.704	2641.007	2608.286	2603.612
30	2533.497	2491.427	2454.033	2444.684	2421.312
35	2304.454	2276.407	2243.687	2210.967	2210.967
40	2089.434	2061.387	2019.318	2009.970	1977.249
45	1851.042	1822.996	1794.950	1766.903	1766.903
50	1626.673	1589.278	1565.907	1547.209	1523.837
55	1378.933	1346.212	1322.840	1299.469	1285.446
60	1121.843	1103.146	1089.123	1070.426	1056.403
65	864.754	860.080	850.731	827.360	822.685
70	640.386	635.711	621.688	612.340	602.991
75	401.994	416.017	420.691	406.668	397.320
80	205.671	215.020	215.020	219.694	224.369
85	65.441	70.115	84.138	74.790	79.464
90	0.000	0.000	0.000	0.000	0.000

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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-20	1125.27	N.A.	14.60
0-30	2342.98	N.A.	30.40
0-40	3750.95	N.A.	48.70
0-60	6327.7	N.A.	82.10
0-80	7607.44	N.A.	98.70
0-90	7707.3	N.A.	100.00
10-90	7412.2	N.A.	96.20
20-40	2625.68	N.A.	34.10
20-50	4015.26	N.A.	52.10
40-70	3418.56	N.A.	44.40
60-80	1279.73	N.A.	16.60
70-80	437.92	N.A.	5.70
80-90	99.86	N.A.	1.30
90-110	0.00	N.A.	0.00
90-120	0.00	N.A.	0.00
90-130	0.00	N.A.	0.00
90-150	0.00	N.A.	0.00
90-180	0.00	N.A.	0.00
110-180	0.00	N.A.	0.00
0-180	7707.3	N.A.	100.00

Total Luminaire Efficiency = N.A. %

ZONAL LUMEN SUMMARY

Zone	Lumens
0-10	295.10
10-20	830.17
20-30	1217.71
30-40	1407.97
40-50	1389.58
50-60	1187.17
60-70	841.81
70-80	437.92
80-90	99.86
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00

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COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

Effective Floor Cavity Reflectance 0.20

RC	80				70				50			30			10			0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	109	105	101	97	107	103	99	96	98	95	93	94	92	90	91	89	87	85
2	100	92	85	80	97	90	84	79	87	82	77	83	79	75	80	77	74	72
3	91	81	73	67	89	80	72	67	77	70	65	74	69	64	71	67	63	61
4	84	72	64	57	82	71	63	57	68	62	56	66	60	55	64	59	55	53
5	77	65	56	50	75	64	56	49	62	54	49	60	53	48	58	52	48	46
6	72	59	50	44	70	58	49	43	56	48	43	54	48	43	53	47	42	40
7	66	53	45	39	65	52	44	39	51	44	38	49	43	38	48	42	38	36
8	62	49	40	35	60	48	40	35	47	39	34	45	39	34	44	38	34	32
9	58	45	37	31	57	44	36	31	43	36	31	42	36	31	41	35	31	29
10	54	41	34	28	53	41	33	28	40	33	28	39	33	28	38	32	28	26

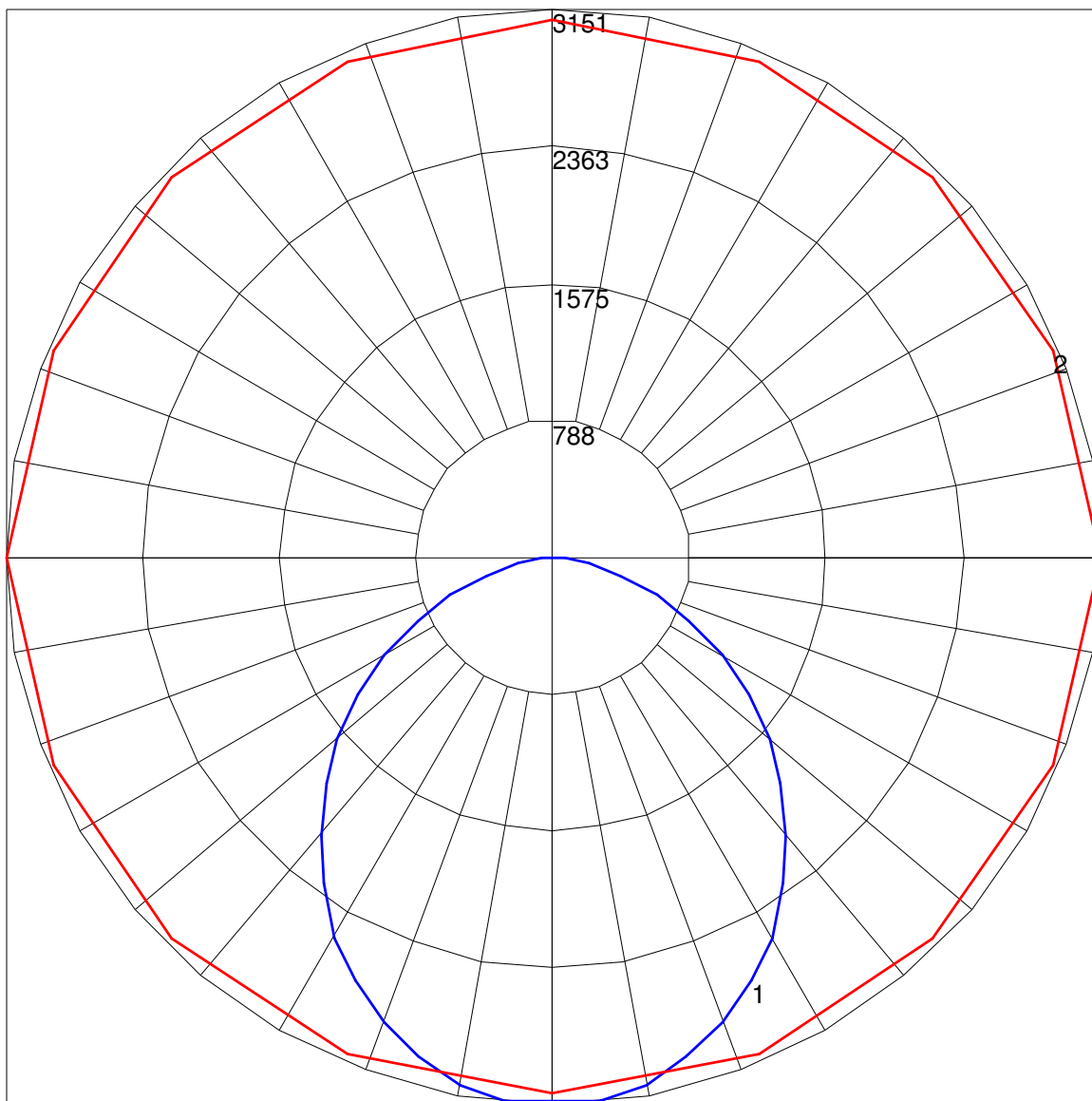
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UGR TABLE - CORRECTED

Reflectances											
Ceiling Cavity	70	70	50	50	30	70	70	50	50	30	
Walls	50	30	50	30	30	50	30	50	30	30	
Floor Cavity	20	20	20	20	20	20	20	20	20	20	
Room Size											
		UGR Viewed Crosswise					UGR Viewed Endwise				
X=2H	Y=2H	20.0	21.6	20.4	21.9	22.2	19.7	21.3	20.1	21.6	21.9
	3H	21.6	23.0	21.9	23.3	23.7	21.3	22.7	21.7	23.0	23.4
	4H	22.1	23.4	22.5	23.8	24.2	21.8	23.2	22.2	23.5	23.9
	6H	22.4	23.6	22.8	24.0	24.4	22.2	23.4	22.6	23.8	24.2
	8H	22.5	23.7	22.9	24.0	24.4	22.3	23.5	22.7	23.9	24.3
	12H	22.5	23.6	22.9	24.0	24.4	22.3	23.5	22.8	23.8	24.3
4H	2H	20.5	21.9	20.9	22.2	22.6	20.3	21.7	20.7	22.0	22.4
	3H	22.3	23.4	22.7	23.8	24.2	22.1	23.2	22.5	23.6	24.0
	4H	23.0	24.0	23.4	24.4	24.8	22.7	23.7	23.2	24.2	24.6
	6H	23.4	24.3	23.8	24.7	25.1	23.2	24.1	23.6	24.5	25.0
	8H	23.5	24.3	23.9	24.7	25.2	23.3	24.2	23.8	24.6	25.1
	12H	23.5	24.3	24.0	24.7	25.2	23.4	24.1	23.9	24.6	25.1
8H	4H	23.2	24.0	23.6	24.5	24.9	23.0	23.8	23.4	24.3	24.7
	6H	23.7	24.4	24.2	24.9	25.3	23.5	24.2	24.0	24.7	25.2
	8H	23.8	24.4	24.3	25.0	25.4	23.7	24.3	24.2	24.8	25.3
	12H	23.9	24.5	24.4	25.0	25.5	23.9	24.4	24.4	24.9	25.4
12H	4H	23.2	23.9	23.7	24.4	24.9	23.0	23.7	23.5	24.2	24.7
	6H	23.7	24.3	24.2	24.8	25.3	23.6	24.2	24.1	24.7	25.2
	8H	23.9	24.4	24.4	24.9	25.5	23.8	24.3	24.3	24.8	25.4

Maximum UGR = 25.5

POLAR GRAPH



Maximum Candela = 3150.51 Located At Horizontal Angle = 0, Vertical Angle = 5
1 - Vertical Plane Through Horizontal Angles (0 - 180) (Through Max. Cd.)
2 - Horizontal Cone Through Vertical Angle (5) (Through Max. Cd.)